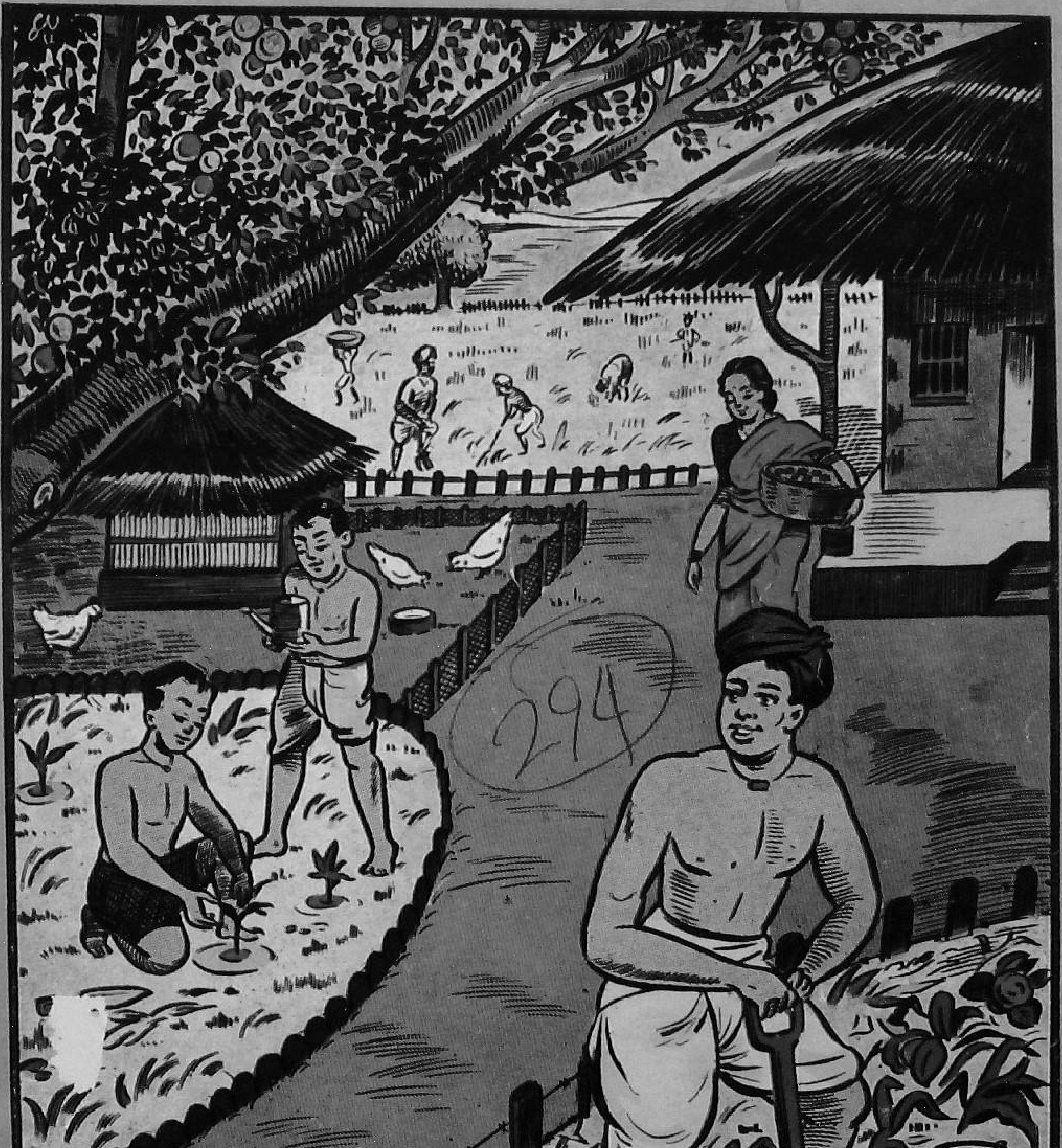
THE APPLIED NUTRITION PROGRAMME



MINISTRY OF COMMUNITY DEVELOPMENT AND CO-OPERATION
GOVERNMENT OF INDIA
1965

OFFICE OF THE PRINCIPAL ... T. KALLUPATTI
18 JUN 1965

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THE APPLIED NUTRITION PROGRAMME

What it is

What it means

What it aims to accomplish

MINISTER
COMMUNITY DEVELOPMENT
AND COOPERATION
INDIA
New Delhi
October 23, 1964

FOREWORD

A man is what he eats, what he thinks, where he lives and what he does to earn his living. India did have health, wealth and culture all in abundance; but this was in the remote past. We have been bypassed by centuries of development in modern science. In the meantime, the population has grown by leaps and bounds. Resources of land have remained more or less static. No wonder, when we woke up after August 15, 1947, we found ourselves a nation denuded of health and wealth and of a culture which could give us sustenance in the world of today.

The Five Year Plans are an effort by the nation to husband its relatively limited resources so that development of the people in all facets of their life could be accelerated at the highest pace possible. Ultimately, what we get out of our Five Year Plans will depend on the quality of the human beings who undertake to implement them. The quality of the human being will in turn depend on the energy he consumes and the chemistry with which he converts this energy into work. Food necessarily acquires a pre-eminent position as the producer of the energy for work. We do not have enough food to meet the needs of all our people. We have to be selective; therefore, alongside the general programme of increased agricultural production, we have taken up a limited programme of applied nutrition and protective food in a selected number of areas in the country. To start with, the beneficiaries from these are confined to pre-school and school children and expectant and nursing mothers.

We are grateful to UNICEF, FAO and WHO which have helped us in a substantial way in giving a start to the Applied Nutrition Programme. This pamphlet which bears testimony to the combined effort of these international agencies and of our people in India should prove of advantage to all workers interested in promoting the Applied Nutrition Programme. I commend this publication for their reading.

PREFACE

Applied Nutrition Programmes are being started in pilot project areas in many parts of the Country.

They depend for their success on the full cooperation of the people whom it is hoped they will benefit.

This cooperation cannot be given, unless the people in the villages understand what the programmes are, what they hope to achieve, how they expect to achieve the objectives set forth for them and how the village people can help to make them succeed.

This pamphlet is addressed to all the people in the villages of India, in the hope that it will help them to understand, and so to cooperate, in a programme, which will help them and their children attain a healthier, happier and more rewarding life.

Although this English version should be useful for the staff of Training Centres, Village Schools and in the Blocks, the local language publications, to be brought out by State Governments, will benefit the members of village communities to whom this pamphlet is primarily directed.

It is hoped, that copies will be supplied to all members of Mahila Samitis, Yuvak Mandals and other village Clubs and Associations, to school masters and school children and to all those who work with village people throughout India.

——o——

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THE APPLIED NUTRITION PROGRAMME

What it is. What it means. What it aims to accomplish.

In your village today, you find children who are blind

In your village today, you find children who will grow up permanently crippled or maimed.

In your village today, you find women who never know what it is like to be healthy and strong

In your village today, babies are born who may never survive for more than three or four years.

THIS IS A TRAGEDY

It is a tragedy for the individuals themselves

It is a tragedy for their families

It is a tragedy for your village

It is a tragedy for our country

WHY DO THESE TRAGEDIES OCCUR ?

One REASON is

BECAUSE PEOPLE DO NOT EAT ENOUGH OF THOSE FOODS THAT WOULD KEEP THEM HEALTHY

The Applied Nutrition Programme

COMES

To Help You

THE APPLIED NUTRITION PROGRAMME

wants to

TRY TO STOP THIS WASTE OF HUMAN LIVES, THIS CHRONIC ILL-HEALTH AND THE DESPAIR AND HOPELESSNESS IT BRINGS WITH IT ;

TRY TO STOP THESE HUMAN TRAGEDIES ;

MAKE IT IMPOSSIBLE, IN FUTURE, FOR THESE THINGS EVER TO OCCUR AGAIN ;

HELP TO MAKE PEOPLE HEALTHY, ACTIVE, ENERGETIC, HAPPY AND HOPEFUL FOR THE FUTURE.

How can this Programme try to do all this ?

This pamphlet will help you to understand

THE APPLIED NUTRITION PROGRAMME,

to make use of it and to make it

Your Programme

For the benefit of yourself, your family and your country

YOU CAN MAKE IT A SUCCESS

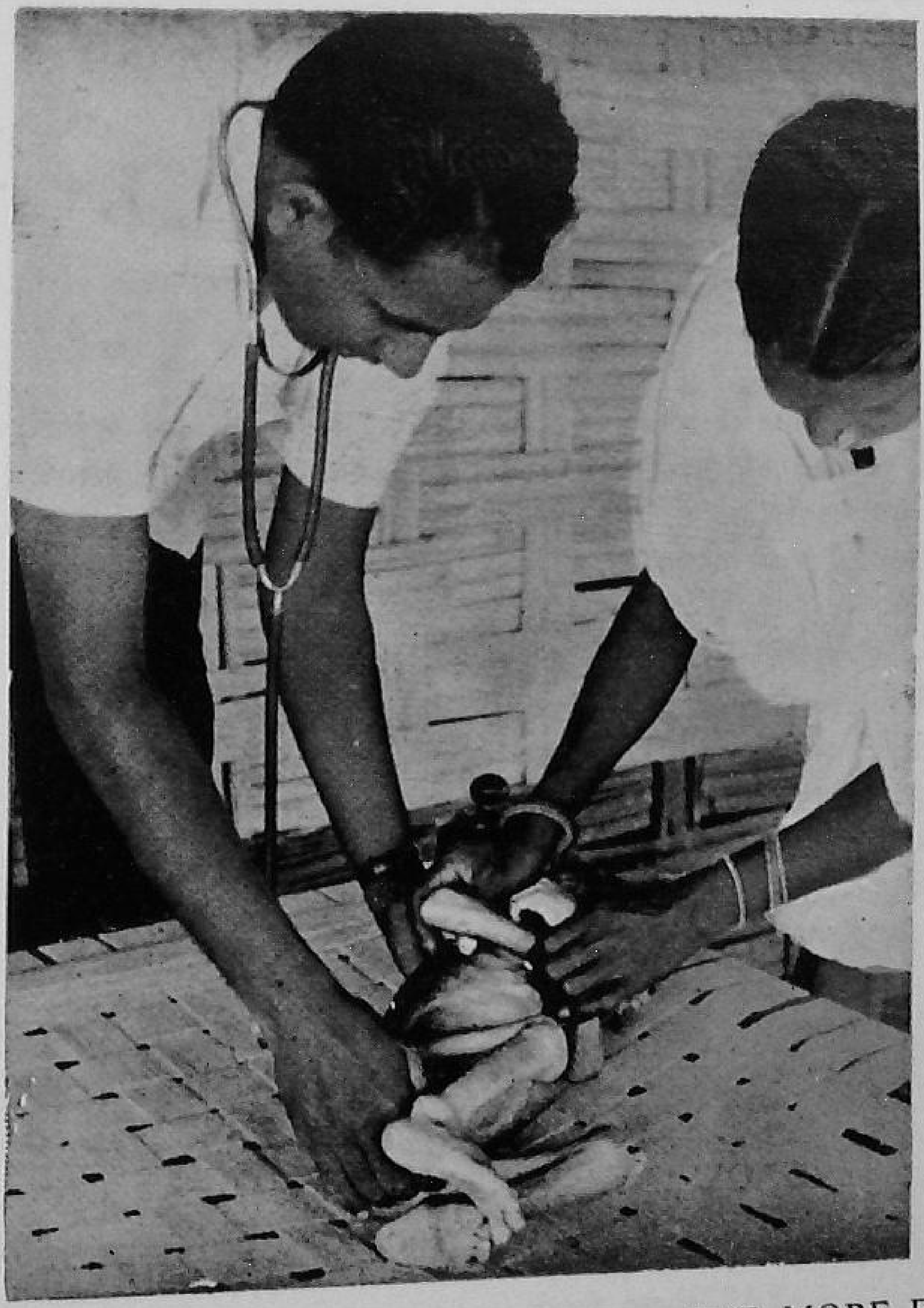
WITHOUT YOUR COOPERATION, THE PROGRAMME WILL NOT SUCCEED.

Causes of ill-health, blindness and premature death :

Among the most important causes of ill-health, blindness and premature death in India today is the fact that very many people do not *eat enough* of the different foods necessary to keep them healthy.

The people do not *eat enough* of such foods because they do not *grow enough* of them.

The people do not *grow enough* of the right kinds of food, because they do not *realise their value* and importance for the maintenance of health.



Picture I

Sick child being examined by a doctor

GROW MORE FOOD EAT MORE FOOD
THAT IS THE ANSWER

Picture 1 shows a baby being brought to a Primary Health Centre for

examination by a doctor. He has not been given the right kind of food and is sick. The doctor may be able to give the baby some pills and medicine to help him get better. But he may get sick again after a while.

Not every baby can be given pills and medicine

But every baby should and MUST be given proper food to prevent him becoming sick.

Then the baby will not have to be taken to the doctor because he has been fed properly and given the right food.

Then the baby will grow up strong and healthy

Many kinds of illnesses occur because sufficient quantities of the right kinds of foods are not eaten. These illnesses include. :

> **Lack of growth, extreme thinness with protruding stomach and spindly legs of children; several kinds of skin conditions, cracking and soreness of the tongue, inflammation of the eyes, night blindness in children and adults; weakness and poor blood conditions (anaemia), especially among women.**

The illnesses which can occur because sufficient quantities of the right kind of food are not eaten, are found both in the towns and in the countryside. But usually, the food stuffs that must be consumed to prevent these illnesses can only be grown in the countryside. They must, therefore, be grown in sufficient quantities to satisfy the needs of the people who live in the countryside and also to satisfy the needs of the people who live in the towns.

It is the people in the countryside who MUST

GROW these foods

EAT these foods

SEND some of these foods to the towns

At first, you will need help to do all this

You will require guidance and encouragement

BUT

You must know that it is only by

YOUR OWN EFFORTS

that you can grow these foods

You must know that it is only through YOUR OWN EFFORTS that you will be able to keep your children and yourselves healthy and happy.

You must know that it is only through YOUR OWN EFFORTS that you will be able to produce extra foodstuffs to sell in the towns for money which can be used to raise your own standards of living.

Those of you who can read this pamphlet must also inform others how all these things can be achieved.

IT IS YOUR PROGRAMME

IT IS THEIR PROGRAMME

IT IS OUR PROGRAMME

Let us all make it succeed

THE PRODUCTION OF FOOD

Vegetable Production

Many young children get sore eyes and find that they cannot see easily in a dim light. Their eyes may get worse, if they are not quickly attended to. The children may become totally blind.

One of the reasons for these sore eyes is because the children do not eat enough nutritious vegetables. Valuable vegetables to prevent trouble of this kind from affecting the eyes are: GREEN LEAFY VEGETABLES. They are CHEAP and easily available. They include :

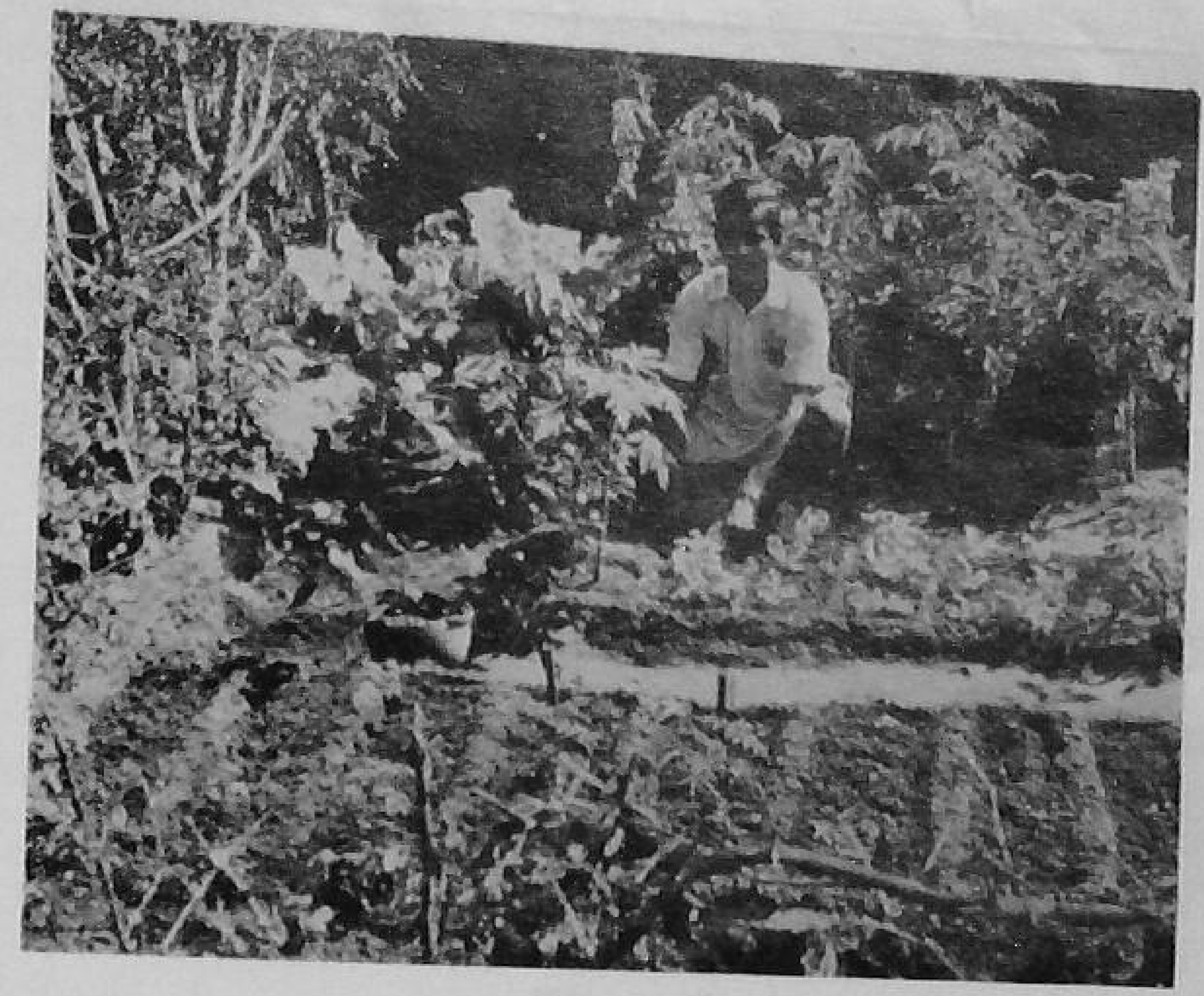
Cabbage, spinach, lettuce, pumpkin leaves, drumstick leaves, amaranth, chekur manis, chowli, colocasia (green leaves), colocasia (black leaves), radish tops, etc. The actual types will vary from region to region, season to season and according to local availability.

Every child should eat from ½ ounce to 3 ounces of *green leafy vegetables every day* according to his or her age. His parents should also eat about 3 to 4 ounces of these vegetables every day. They are very valuable foods and can easily be eaten with rice, dhal and other vegetables or with chapatties.

Other valuable vegetables and fruit, which also help to prevent eye sickness and which should be eaten as well as green leafy vegetables, include all those vegetables and fruit which are RED and YELLOW in colour. These include carrots, tomatoes, yellow sweet potatoes, pumpkins, mangoes, papayas, etc.

These vegetables and fruit are not difficult to grow. They do not need much land. They can be grown in quite small patches of land near your house, where you can obtain water and where you can protect them against stray goats and cattle.

Look at Picture II. This boy has learned how to grow valuable nutritious vegetables at school, where there is a very good SCHOOL GARDEN. He



Picture II

Schoolboy tending his own kitchen garden

asked for some seeds and is now growing valuable vegetables on a small piece of land behind his house. He has started a HOME GARDEN. He has built a fence round his garden to keep out goats and cattle. You can see part of this fence on the left side of the picture. The previous year this was a piece of waste land—of no use to anyone. Now, this boy is growing vegetables for home consumption, which will help to keep his brother, his sister, his parents and himself, healthy and strong.

If you have some waste land near your house, why don't YOU start growing useful vegetables like this boy ?

Has YOUR school in YOUR village got a vegetable garden ? If not, why don't you try to start one? Let the teachers of the village school be encouraged to take initiative in developing the school-garden. The village panchayat could allot a piece of land for tbe garden near the school building, if it has not yet done so. The school children could help the teacher in developing the school garden. If the children are too young for such work, the help of the members of the village youth club could be sought. They will willingly respond. Some of the members must have studied at the village school. They would consider this as their obligation. The school garden would provide vegetables for the children of your village.

Picture III

Part of a well-laid out community garden

Picture III shows three members of a Yuvak Mandal (Youth Club) looking after a COMMUNITY GARDEN. This is where village groups like Mahila Samitis and Yuvak Mandals can help themselves, their parents and their friends to obtain nourishing foodstuffs to eat and to sell.

If you are a member of a Yuvak Mandal or of a Mahila Samiti (or Mandal), or if you are able to help, why not try and persuade the Panchayat to release some land near your village so that YOU can also start a COMMUNITY GARDEN in your own village ?

Would YOU not like to grow fine cabbages, tomatoes, onions, peas, beans, chillies and other vegetables, like the Club Members in this picture ?

You can do it, if you really want to

> These gardens can grow fruit as well as vegetables, but, of course, the kinds of fruit and vegetables will depend upon the region in which the gardens are situated.

A community garden run with the help of the Yuvak Mandal and Mahila Mandal has an added advantage of getting the services of a large number of villagers for growing vegetables free of charge. They will take care of the

village garden and will feel happy to utilise their energy in the service of the village community. The vegetables and fruit grown in the community garden should be used for feeding children and expectant mothers of the village free of charge. Thereafter some of these could be shared with the members of these organisations as a reward for their labour. The remaining produce could be sold and the money so gained could be used for further developing the community garden. The community garden developed with the help of the Yuvak Mandal and Mahila Mandal could, thus, provide assistance to many.

One of the principal objects of the APPLIED NUTRITION PROGRAMME is to help in the creation of *home gardens*, *school gardens* and *community gardens*. The State Government is growing seeds and producing grafts of fruit trees for distribution to blocks and villages, for use in school and community gardens.

You can obtain further details about these seeds and grafts

from

Your Gram Sevak or Gram Sevika

who will also help you to obtain good seeds and also young fruit trees, if you wish to start a home garden yourself.

The State Government is also arranging for a selected number of school teachers and members of Yuvak Mandals and Mahila Samitis, to be given special instruction in gardening and vegetable and fruit growing.

YOUR CHILDREN will learn these things at school.

If YOU have been chosen to take the special instruction, you must help your friends and other members of your Club, so that they will also learn how to grow vegetables and fruit.

If YOU have not been chosen to receive special instructions, but wish to start a vegetable and fruit garden of your own, you must ask those who have been trained to help you.

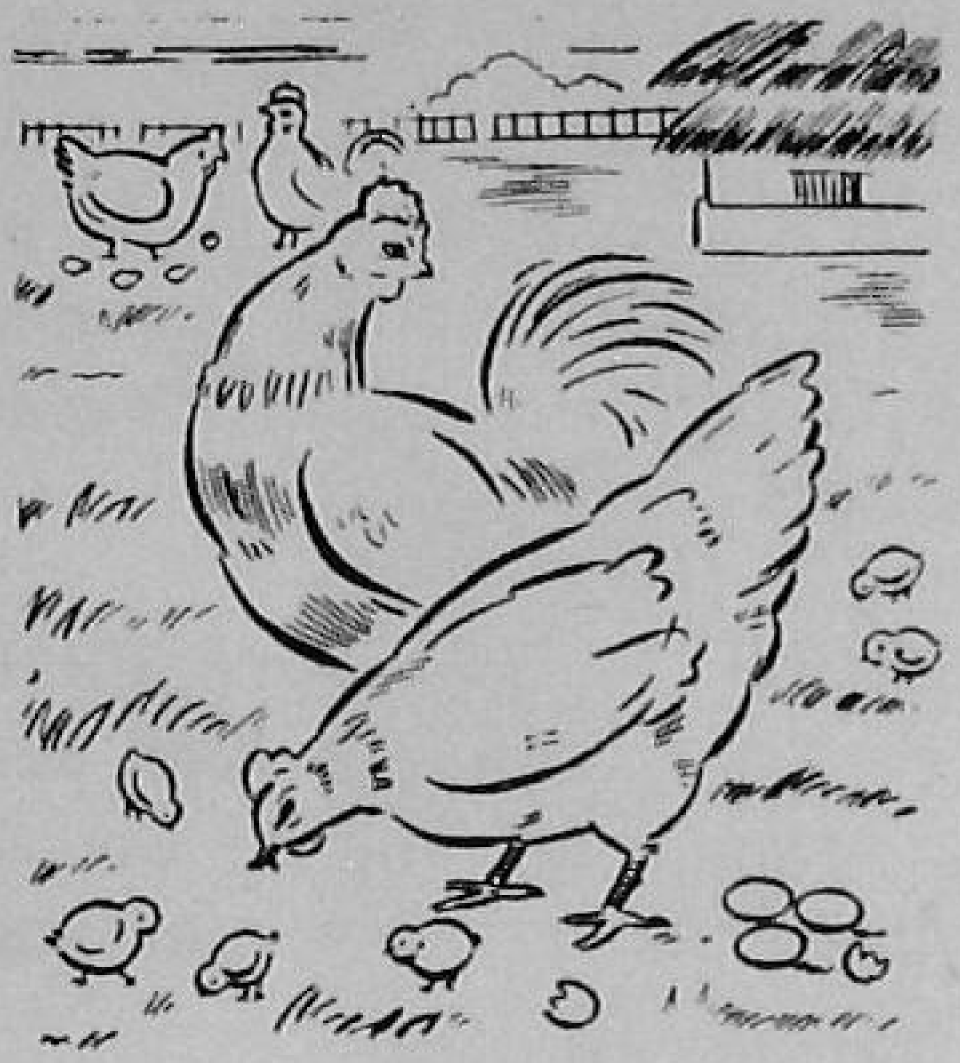
YOUR Block Development Officer

and

YOUR Block Agricultural Extension Officer

WILL ALSO HELP YOU

Poultry Keeping



In many places, people already keep poultry. When they obtain eggs, they sell them in order to obtain money to buy the things they need. But, usually, the hens are let loose all over the village and no special care is taken to feed them. As a result, these hens do not produce many eggs; and these eggs are very small.

When hens are allowed to run loose, it is difficult sometimes to find all the eggs; the hens easily become ill; and they may be killed by dogs, jackals or other animals. Also, perhaps, some neighbours may not like hens and there may be quarrels.

When hens are kept loose in this way, many problems and difficulties may occur.

How to keep poultry

Now look at Picture IV. Here the hens are kept in a special poultry house.

These hens are not allowed to wander about all over the place.

These hens do not have to scratch around to look for sufficient food to eat.

These hens are given proper feed and water regularly.

In this picture, you will see some hens eating this good feed.

They are happy hens.

They live in a house. The floor of the house consists of thick straw, rice or maize husks or similar materials.

The hens are warm in cold weather.

The hens are cool in hot weather.

Picture IV

Good quality poultry in a village deep litter poultry unit

This is the 'DEEP LITTER' way to keep poultry.

These hens are protected from dogs or other animals.

These hens are less likely to die from disease.

These hens are WELL KEPT BIRDS.

As a result of being well looked after, these birds lay eggs.

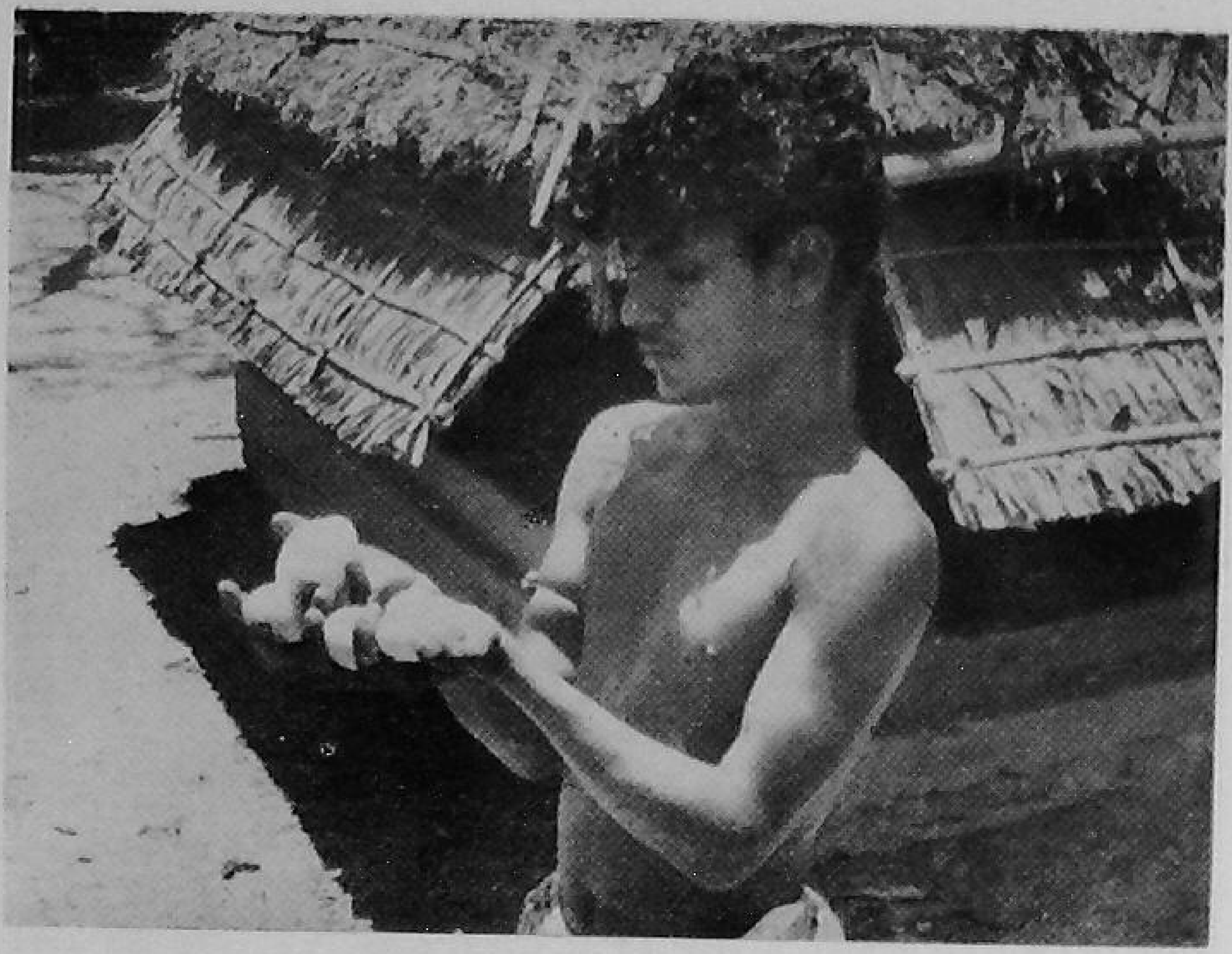
They lay MANY EGGS

They lay LARGE EGGS

They will lay up to 200 large eggs a year

Look at Picture V. Here is a Youth Club member with some eggs from the Club's DEEP LITTER village poultry unit. They are big eggs and he obtains quite a large number every day.

Some of these eggs are given to the Mahila Samiti, so that the members can provide extra food for very young children and some of the



Picture V

A member of the Yuvak Mandal proudly displays large eggs from the poultry unit ; note poultry house behind him

expectant or nursing mothers, who need extra food, such as eggs, to help them become strong and well.

Some of these eggs are distributed to the Club members, for their own use and for their families.

Some of these eggs are sold. With the money, the Club members can improve the amenities of the village, help to build a Club House or obtain additional equipment.

Thus MANY PEOPLE are helped, when a DEEP LITTER poultry unit has been started in a proper manner in a village.

Valuable Fertiliser:

Many farmers know that, if they could easily obtain fertiliser, the yield of their crops would increase and they would be able to obtain more food and other produce from their land.

But it is not always easy to obtain fertiliser.

In any case, fertilisers are expensive.

But, if you keep poultry by the DEEP LITTER method, you can obtain

very good fertiliser FOR NOTHING.

Poultry manure is far better than other forms of manure; the straw or rice or maize husks with which the poultry manure is mixed, is also very good for the land.

THE USED LITTER FROM YOUR POULTRY HOUSE IS VALUABLE MANURE

When put on the land, it will increase the yields of the crops—whether they are rice, wheat, vegetables or anything else.

The used litter from 40 birds will manure ONE ACRE of land.

Thus if you use the DEEP LITTER method for keeping poultry, you will obtain good manure *as well as* eggs.

The Poultry House:

Look at Picture V again. In the background, you will see the poultry house—the DEEP LITTER poultry house. This house is made of materials which can be obtained locally. In different parts of India, the houses are made of different materials. These depend on what are cheap and easily available.

They do not cost a great deal to build.

In any case:

The Government will help with the cost; the Government will also supply materials like wire netting to help build these

good types of poultry houses.

How Government can help You to keep poultry and produce good eggs.

Under the APPLIED NUTRITION PROGRAMME, the Government is helping members of Youth Clubs, Mahila Mandals (Mahila Samitis) and, in some cases, individual people in villages, to start keeping poultry by the modern DEEP LITTER Method.

Training :—First of all, if a group of people in a village wants to start keeping poultry, the Government will arrange for one or two members of the group to be given a short course of training at the nearest Regional or District Poultry Farm.

Poultry House:—When these people have been trained and have returned to their village, the Government will help them—either by supplying materials like wire-netting or by a money grant or loan—to build a poultry house of approved design.

Good quality birds—Then, when the poultry house is ready,

the GREAT DAY arrives

the BIRDS arrive

On this day, the good quality hens and cocks are delivered to their new owners and are put into their new house.

The birds soon settle down in the nice house, where they will be safe and well looked after.

In return, the hens will soon start laying GOOD, LARGE EGGS

But you will say—"How do I feed them?"

The Government will help you again

Good feed for the birds :—During the first year you will be able to obtain, from your Block Headquarters, a regular supply of carefully prepared feed for your birds. The composition of this feed has been carefully worked out, so that the birds will thrive. This feed can be supplied in two ways

(i) It can be supplied as a complete feed. All you have to do is to give it regularly to the birds, as you will have been taught to do during your training.

But when the feed is supplied in this way, it is bulky to transport and thus costs more. So another method for supply has been arranged.

(ii) By this method, your Block Headquarters will supply at regular intervals, a *concentrated mixture*, which contains all the special nutrients the birds require, but not the basic grain. This must be provided locally. It can be wheat, broken rice, maize, millet or similar grain; often, grain that is not suitable for human consumption can be used, while at least half of this grain can be rice or wheat bran.

When the concentrated mixture arrives, it must be *thoroughly mixed* with the cereal grain and bran in the correct proportions; this will then provide a perfect feed, which is specially designed to keep the birds healthy and will help them to lay plenty of *good large eggs*.

Eggs for children and mothers

Now you have been told that the Government can help YOU to start keeping poultry in a profitable and useful manner. YOU may be a member of a Youth Club or of a Mahila Mandal or a private individual.

The Government has given training.

The Government has helped in the building of the poultry house.

The Government has helped to provide the good feed for the birds.

What does the Government expect from YOU ?

The Government will ask that, for a stated period of time, an agreed number of eggs be supplied, at regular intervals, to help feed very young children or pregnant and nursing women, who badly need extra food to help them become strong and well.

The number of eggs to be given free in this way will still leave the poultry keepers—the Club members, that is YOU—with plenty of eggs for your own use. These can either all be eaten by your own family and the families of the other Club members; or, some of the eggs may be sold and the money used to help you or the Club members.

These 'free eggs' will be given in return for all the help that the Government has provided to enable the Youth Club, Women's Association or individual to start poultry keeping.

But sufficient eggs will be left to provide a *good profit* and so make it worthwhile to continue to increase the number of hens to be kept.

As some of the children and mothers to be helped in this way may belong to the families of the members of the clubs or of the keeper of the poultry, they will gain in several ways.

Children and Expectant Mothers will be helped to become strong, by being provided with eggs :

Yuvak and Mahila Mandals will obtain eggs some of which they can keep for their members and some they can sell. Out of the return they can provide amenities for their clubs.

They can also obtain *more money* by selling the used litter from the poultry house for use as *fertilisers.*

Why Don't YOU start keeping poultry?

Under the APPLIED NUTRITION PROGRAMME, the Government want to encourage poultry units, using the DEEP LITTER method,

in every Block and *in every village*

covered by the programme.

If YOU live in one of these villages or are associated in any way with these villages, make sure that a poultry unit is started

in

YOUR VILLAGE

Make sure that YOU have a share in the poultry unit

THEN, YOU can make sure that birds will be well looked after, as they will be YOUR birds.

THEN, the birds will provide plenty of eggs to help keep YOUR children, YOUR family and YOUR SELF

strong and healthy.

The eggs will also bring money to the village to help everyone live better. This money can be used to build a Samiti house or to provide amenities which are required in the village.

Make Sure that

a poultry unit is started in YOUR village,

it is managed properly,

your family, your friends and YOU obtain full benefit from the poultry unit.

IT WILL BE YOURS

MAKE IT A SUCCESS

Fish Production

Inland Fish Cultivation

In several parts of the country, such as West Bengal, Madhya Pradesh and Orissa, the culture of fish in tanks, ponds, and reservoirs has been undertaken by private operators on a commercial scale for many years; and the fish is sent to Calcutta and other large cities.

Under the APPLIED NUTRITION PROGRAMME, the Government is anxious to encourage increased inland fish production. The Government wishes to encourage Panchayats, fishermen's co-operatives and other organised groups, such as Youth Clubs, to take up fish culture for their own benefit and for the benefit of their communities.

Repair and de-weeding of tanks and ponds:—There are many tanks and ponds in different parts of the Country, which contain plenty of water throughout the year and could be used for the fish culture.

But they have become silted up or blocked with weeds.

Wherever a suitable tank or pond exists near a village, which is to be taken up under the APPLIED NUTRITION PROGRAMME, the Government will provide assistance, so that fish culture can be started, for the benefit of the Panchayat and the people in the village.

How the Government will help:—First of all, the State Department of Fisheries will examine the tank or pond and will decide whether it is likely to be suitable for fish culture. This will depend on such things as the depth of the water throughout the year, whether there will be food for the fish and whether the Panchayat and the village community as a whole are willing to look after the fish pond properly.

If it is decided that the pond or tank near your village could be used for the cultivation of fish, it may first be necessary to remove mud, sand and weeds.

This is where YOU and the people in YOUR village can help.

The Government will bring equipment to assist in the removal of weeds, dead trees, branches of trees etc.*

but

YOU and the people in YOUR village will be expected to help deepen the tank, if necessary, by removing mud and silt.

In this case, YOU should do all that you can to encourage your friends, members of the Yuvak Mandals in the village and other people in the village to help in this work.

Then YOU and everyone in your village can regard the pond as

YOUR POND

Then YOU and everyone in your village can regard the fish as

YOUR FISH

When the fish have had time to grow large, then YOU and everyone in your village, including YOUR children will benefit.

Stocking the pond with fish :—When the fish pond is clean and ready, the Department of Fisheries will bring baby fish—known as fingerlings—in special containers and will put these baby fish in the pond. The fish that are used are those which grow quickly and are very good to eat.

In order to stock all these new ponds and tanks, which will be started in villages, large quantities of fish eggs are being hatched in Government Fish Farms and Research Stations. This will enable sufficient fingerlings to be made available for stocking the village fish tanks and ponds.

Training :—At the same time, arrangements are being made for a few selected persons from each village where a fish pond is to be started, to go to a Government Fish Farm, where they will be taught how to look after the fish pond, how to keep it clean and in good repair and how to feed the fish and look after the fish properly, so that they will quickly grow to a useful size.

Catching the fish:—After a sufficient time has elapsed—usually about one or two years—the time will come when the fish will be large enough and the pond

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**NOTE*: This will vary from State to State. In some cases, no such equipment will or can be made available.

can be harvested. Then the large fish will be caught and will provide quantities of very valuable food.

Picture VI shows trained villagers assisted by members of the Yuvak Mandal/Yuvak Sanghas pulling in the net which catches fish. The nets are made from nylon and the Government will help the Panchayat or Cooperatives to obtain them.

Picture VI
Yuvak Mandal members hauling in a catch of fish from the Panchayat pond

The Government will also show the operators how to use them, so that the large fish can be quickly and easily caught.

The nets are so designed that the very small fish escape back into the pond where they can stay safely until they-grow sufficiently large. Any medium sized fish which are caught in the net should also be returned to the pond, because it is better and more economical to keep only the BIG FISH.

Distributing the fish :—As in the case of vegetables and eggs, you are expected to give a small proportion of the fish that are caught, for the benefit of the very young children or mothers in special need of this extra nourishing food. This is in return for the equipment and help provided in stocking the pond.

The proportion of the fish which will be taken for this purpose will usually be about one tenth—and never more than one fifth—of all the fish caught from the pond.

Feeding of women and children:—In most cases, the fish for free distribution will be handed over to the Mahila Mandals (Mahila Samiti) who can make arrangements (see page 39) for the fish to be used in cooked meals for the young children. In some special cases, some of this fish may be distributed to women who are pregnant or who are nursing babies or who are ill and are in special need of this extra nourishment.

Value of the fish:—The remainder of the fish caught from the pond will belong to the Panchayat, Fishermen's Co-operative, or to those who have been entrusted to operate the fish pond. Some of the fish should be bought by the members of the Panchayat or the Co-operative, so that they and their families can have the fish to eat. Fish is a very good food indeed and will make them, their children and their families

STRONG, ACTIVE and HEALTHY.

For this reason, some of the fish from the pond should *always* be retained and eaten by those who own or operate the fish pond.

The remaining fish can be sold for the benefit of other people and the money so obtained can be used to improve the amenities of the village, as decided by the Panchayat or the village community.

Importance and value of a good, village fish pond:—A good, well stocked and well managed village fish pond can be of great value and benefit to a village.

A great deal of work or attention is not required to keep the pond in good condition and to keep the fish healthy and well fed. The fish will grow to a useful size quite quickly and will then help to improve the health and the economic standards of the people in the village.

THE FISH will provide valuable, nourishing food for the very young children and for the women who are in special need of this food.

THE FISH will provide valuable, nourishing food for all those who share in looking after the fish pond and for their children and their families.

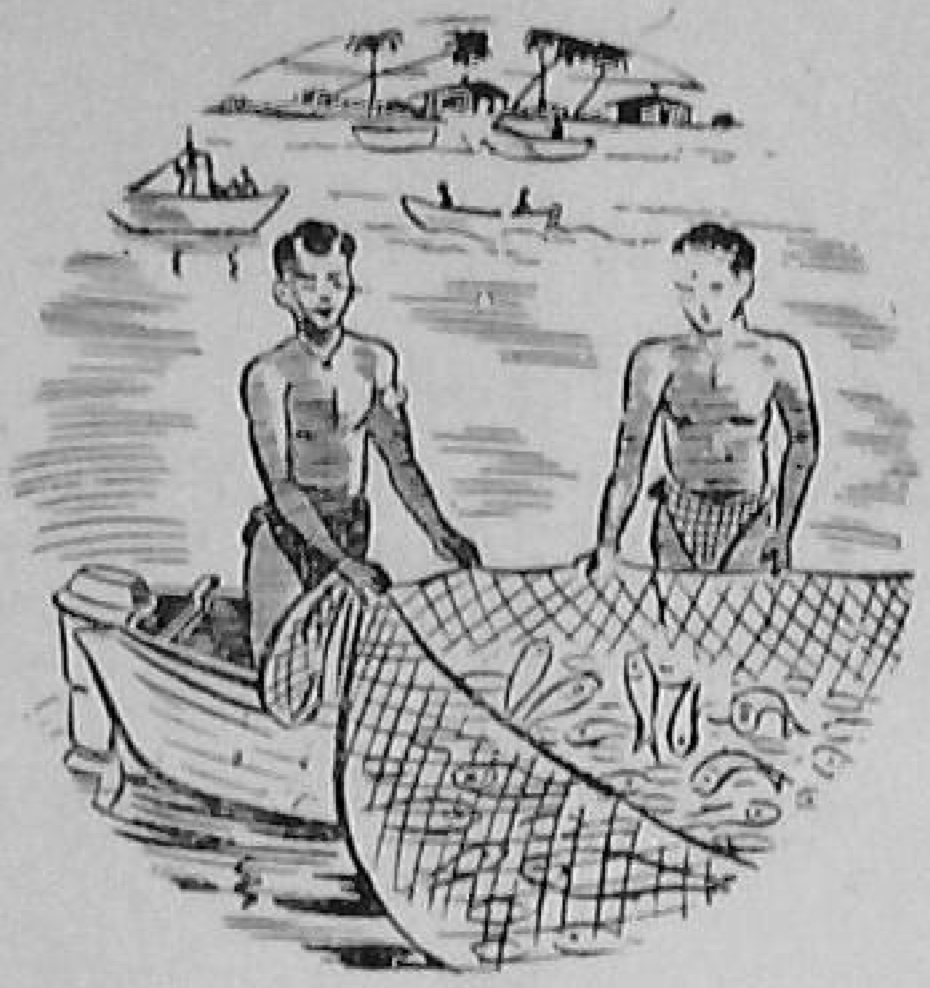
THE FISH will provide additional money to improve the amenities of the village and to increase the prosperity of all those who live in it.

If there is a suitable tank or pond in or near your village, make sure that it will be used for growing FISH.

Your Block Fisheries Officer will help.

Start a fish pond now

Coastal Fisheries



In addition to helping the development of inland fish cultivation, for the benefit of the people who live in the villages where fish tanks and ponds exist, the Government, through the APPLIED NUTRITION PROGRAMME also intends to help coastal fishermen to improve their catches of sea fish so that they and their families in the fishing villages along the coast will also benefit.

Mechanisation of fishing boats:—It has been found that, if existing fishing boats are fitted with small engines, greatly increased catches of fish can be made. If your boat is fitted with an engine, you can trawl both fish and prawns and catch many more than before. This is partly due to the fact that much less time is taken to reach the fishing grounds. Also, with larger boats, using larger engines, fishing grounds further out from the coast can be reached.

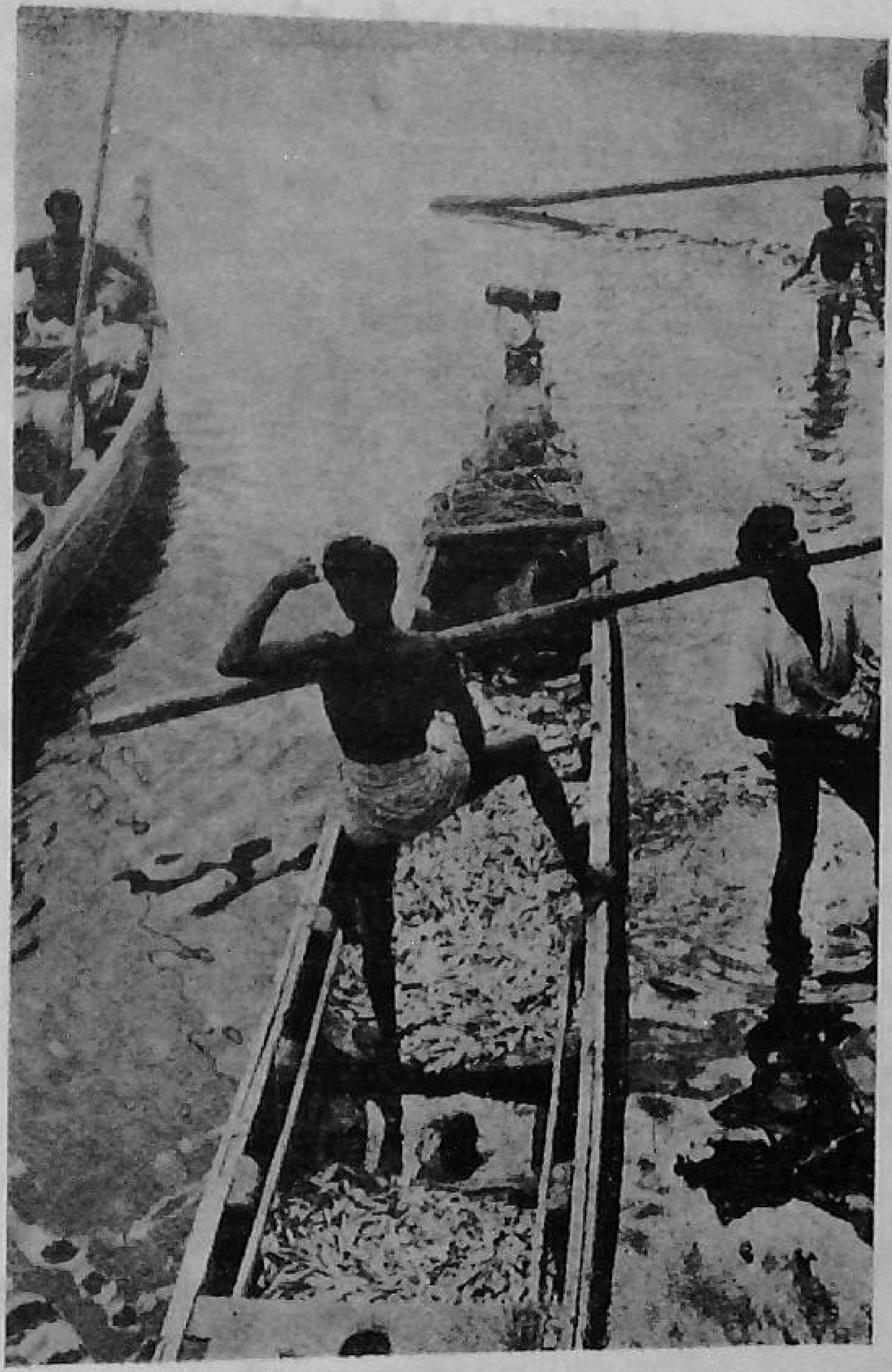
It has also been found that an improved design of nets, made from nylon twine, has been more successful than the old style, made from cotton.

In Picture VII is seen part of a good catch of mixed fish and prawns, which has been made in coastal waters by a small boat, fitted with an engine. By fitting all suitable boats with engines, it is expected that increased supplies of sea fish will be obtained all round the coasts.

How the Government will help:—Under the APPLIED NUTRITION PROGRAMME, the Governments of several States will assist selected groups of fishermen or fishermen's co-operatives, by fitting an agreed number of boats with engines, nets and trawls.

At first, this assistance will be given only in a limited number of places, until experience has shown how this help can best be provided. Then, as more money becomes available, the assistance will be extended as quickly as possibie to other places.

Other programmes for extending coastal fisheries:—It must be remembered that the Central and State Governments are also developing coastal and marine fisheries under the special plans for fisheries drawn up under the third Five Year



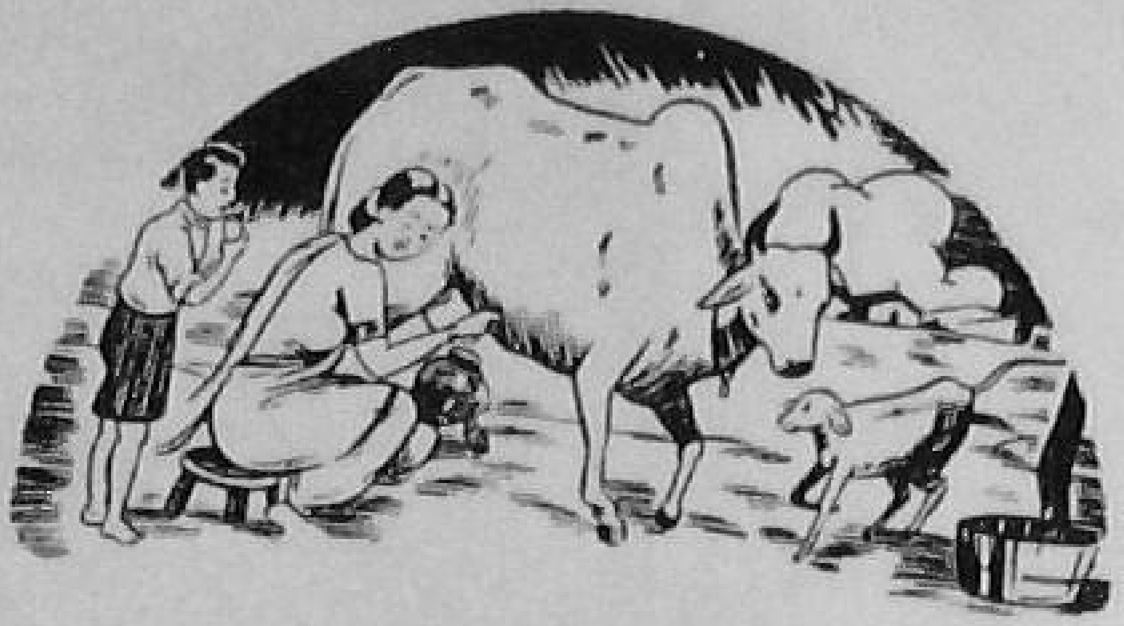
Picture VII

Greatly increased catch of sea fish, obtained from a local boat fitted with an engine

Plan. The extra help to be provided under the APPLIED NUTRITION PROGRAMME will be fitted into existing plans and programmes and is intended to support and strengthen them.

How CAN YOU help—: If you live in one of the fishing villages selected for one of these schemes, give the scheme your full support. The increased amounts of fish which will be caught, will improve the HEALTH, STRENGTH and ECONOMIC STANDARDS of the fishermen and their families and others in the village who like to eat fish.

Milk Production



It is well known that, at the present time, the amount of milk provided by most of the cows and female buffaloes in the country is much less than it should be. Good quality cows and buffaloes, maintained on Government Farms, Research Stations and at Training Centres, usually give far more milk than most of the animals owned by farmers who live in the same districts.

Why should this be so ?

Because the Government Farms, Stations etc. keep :

(i) better *quality* animals,

(ii) better *fed* animals, and

(iii) observe better management practices.

At the present time, all over India, there are large numbers of cows and buffaloes which give little or no milk—but

They still have to be fed,

They still graze on pasture,

They still eat up a great deal of grass and hay.

At the present time, in India, there are large numbers of bullocks which are weak. These animals are not strong enough to pull a cart or a plough.

WHY IS THIS ?

It is because they need more and better feed.

Improvement of milk production :— Many schemes and plans exist which have, as their objective, the increase of milk yields *per animal*, by improving the quality of the animals and by providing them with good, nourishing fodder.

In addition to other Government schemes for improving village milk production, it is now the intention of the Government, under the APPLIED NUTRITION PROGRAMME, to start in a few villages, in a few carefully selected areas, a limited number of intensive pilot projects for increased milk production *by the farmers themselves,*

for their own benefit,

for the benefit of their children,

for the benefit of their families,

for the benefit of the village,

for the benefit of the Nation.

How will these projects operate ? When the districts and villages have been selected for these projects and when agreement with the farmers and village people concerned has been reached, the Government will assist the farmers to grow specially valuable fodder crops, such as berseem, guinea grass, oats, etc. Fertilisers will be provided through the Block agencies and the farmers will be helped and shown how to alternate these fodder crops with the usual crops grown on their land, such as paddy, maize, etc.

At the same time, good oil-cake and concentrated rations for the cows and buffaloes will be provided by local government agencies.

When suitable supplies of good feed have been made available, the Government will either exchange a good *upgraded* cow or a good buffalo for two or more of the farmer's existing animals, or will grant a loan for the purchase of a good animal, on the condition that the farmer promises to feed them properly. If necessary, the farmers will be shown how to look after and feed these animals, so that they will keep strong and healthy and will produce plenty of good milk.

At the same time, arrangements will be made for the construction, in a 'key village', of a small, suitably equipped milk processing plant. Here, the increased supply of milk, collected from the farmers, will be chilled, before distribution.

In return for the supply of the improved animals, fodder and other facilities provided by the Government, some of the processed milk will be supplied, free of charge and for a stated period of time, to the village schools for

feeding the children; while some of the milk will also be supplied to selected young children or to pregnant or nursing women, who specially need the additional nourishment.

Some of the increased amount of good milk will be used by the farmer, for his own children and family.

The remainder of the milk will be sold to other people in the village or under co-operative arrangements, to people in neighbouring towns.

What benefit will be obtained from these rural dairies?

By obtaining better quality animals and by feeding them correctly, the farmer will obtain much more milk from them.

He will thus be able to obtain more money from the sale of some of the extra milk.

By proper farming methods and with the use of fertilisers, he will be able to grow wheat or rice or other crops on the land, which can also be used, part of the time, to grow fodder for his animals. This is the principle of *mixed farming.*

In addition to obtaining *more money* from some of the extra milk, the farmer should retain some for the use of his own children and family.

The farmer's children will benefit from the extra milk which will improve their strength and health.

The farmer will benefit from the extra milk which he will be able to sell.

The community will benefit, because some of the extra milk will be given to some of the very young children and to some of the pregnant and nursing women, who need this extra food to make them strong and healthy.

BETTER COWS AND BUFFALOES

BETTER FODDER

MORE MILK

BETTER HEALTH

PROSPERITY

TRAINING AND EDUCATION IN NUTRITION AND HYGIENE

Many people do not make full use of the resources available to them.

They do not know how.

It is necessary to teach people the value of food stuffs and how to obtain the utmost benefit from them.

YOU can have better meals and provide better meals

for

YOUR families and YOURSELVES, if you learn

how to make the best use of foods already available to you,

how to choose the most suitable foods according to what you need

and

how to cook these foods properly.

It is necessary for MOTHERS to learn how to wean their babies properly, so that they will grow up into strong, healthy and active children.

It is necessary for MOTHERS to learn how to feed their menfolk properly so that they can work hard at their daily tasks without becoming exhausted, tired and ill.

It is necessary for EVERYBODY to understand how disease can be spread by flies and other insects.

It is necessary for EVERYBODY to understand how this can be reduced or prevented by protection of the food and by cleanliness during the preparation and cooking of food.

It is necessary for EVERYBODY to realise how much valuable food is wasted because it is eaten or damaged by rats, mice and insects.

It is necessary for EVERYBODY to know how this waste can be reduced and largely prevented by correct and careful methods of storage.

All these things should be known and understood.

All women, all mothers and all housewives should know

how to keep themselves, their children and their families

well-fed and healthy,

by observing simple rules of hygiene and nutrition.

How the Government is helping :

The Government is fully aware of all these needs.

The Government realises that it is not enough just to produce more food.

The Government knows that, *in addition*, people must learn how to obtain the best results from the foods, without wasting or destroying valuable nutrients by incorrect methods of storage, by incorrect methods of food preparation and by incorrect methods of cooking.

For these reasons, great attention is now being placed

on

training and education in hygiene and sound nutrition.

Many people do not realise the benefit to their health and strength that would accrue, if more attention could be paid to the *quality of the food* which they eat.

The fact that people are not *seriously ill*

does not mean that they are *really well.*

Many people undertake their daily tasks, can work all day and think that they are well. Nevertheless, they may easily become tired and do not always feel strong and energetic. If their children go to school, they may be slow in learning their lessons and may be inattentive in classes.

It is often not realised that all this may be due to

incorrect food habits, to insufficient food, to the wrong food.

Sometimes, when only quite small changes are made in their daily diet,

quite noticeable changes occur in people's

physical condition and health.

In order to help you to improve the *quality* and *nature* of the food you eat, the Government, under the APPLIED NUTRITION PROGRAMME, is arranging special training courses in nutrition for all those who can help you to improve your diets. These people include Gram Sevaks, Gram Sevikas, Gram Lakshmis, Assistant Women's Welfare Officers, members of Mahila Samitis and Yuvak Mandals.

These people will be shown how to help you :

to understand the need to include some nutritious vegetables, pulses and fruit in your meals every day ;

to grow or produce more of these nutritious vegetables, pulses, fruit and other foodstuffs ;

to prepare and cook these nutritious vegetables, pulses, fruit and other foodstuffs, so that they will keep their nutrient value.

These training courses will teach you how to preserve fruit and vegetables, so that, at times when these foodstuffs are plentiful and relatively cheap, they can be safely preserved and kept, in order to provide valuable nutrients and variety in the diet in the off season.

They will also teach how to store foodgrains and some vegetables safely and to protect them from loss or damage by insects, rats, and other animals or birds, so that they will remain in good condition during storage.

At the same time, Lady Health Visitors, Health Inspectors, Auxiliary Health Nurses, Midwives and *Dais* will also receive special training so that they will be able to help mothers to understand how best to feed their babies and young children, so that they will become.

Healthy Active and Strong

Steps are also being taken to help teachers, especially those who work in primary schools in country districts, to understand the value of *school gardens* and *school meals*, as a means to teach children sound food and health habits; and to help teachers to understand how they can teach children simple rules of hygiene and nutrition, so that the children will adopt them during their school years and also during the rest of their lives.

How YOU can help: If YOU are a member of a Mahila Samiti or of a Yuvak Mandal, make sure that regular meetings of your Club are arranged, so that YOU and YOUR friends can learn all about these important things.

Ask the Pradhan or Gram Sevak to ensure that the Gram Sevika will come to YOUR village, in order to help you to understand how to improve the food which you eat and give to your families.

If you have attended a course of training yourself try and help your friends and neighbours, so that they can also improve the quality of the meals they prepare for their families.

If YOU work in a village as a Gram Sevika, Gram Lakshmi or as a leader of a Samiti, and have not already taken a course of training in health and nutrition, try and do so as soon as possible, so that.

YOU will be able to help people in the village

to produce, to eat and *to sell* more *nutritious foodstuffs*

Picture VIII
Members of a village *Mahila Samiti* proudly attend the official opening of thier meeting house

Look at Picture VIII. This group of women are keen members of a

Mahila Samiti. For many months, they have worked hard and have slowly collected money.

Why have they collected money ?

Because they wanted a house of their own, where they could meet together and could help each other to learn and to do things to improve *their health, their homes, their education, their living conditions.*

Now, with the money they have collected and with help from the Government, they have built their own meeting house, their *own Club House.*

This photograph was taken when the Samiti members were attending the *Opening Ceremony* of their house.

How will these women use their Club House? The members of the Mahila Samiti will be able to hold regular meetings in this house.

In one room, there are a few sewing machines, so that members can learn how to make clothes for themselves and their family.

In this room, there is a place for books, pamphlets and magazines. Those Samiti members who can read, will help those who still cannot do so, to understand the contents of these books by reading to them.

In this room, those Samiti members who can read, hold regular classes to teach other members to read and to write. Soon, *all* the Samiti members will be able to read and write.

In this house, there is a kitchen, equipped with a *smokeless chula* a fireless stove (hay-box) and cooking utensils, where suitable demonstrations can be arranged.

Here, the Samiti members can learn why certain foods are needed to keep their families healthy ;

Here, the Gram Sevika will demonstrate many ways of preparing these foods ;

Here, the Health Visitor will help the new mothers to plan the right kind of food for their babies ;

Here, the Samiti members can exchange ideas and all will gradually improve their families' meals by using more pulses and greater quantities of green and other nutritious vegetables and fruit.

To this house, children will come. The little girls and boys will learn to dance. There will be music.

To this house, little children will come,—the very small children who are still too young to go to school.

Why will they come ?

They will come, because members of the Mahila Samiti will, by turns, prepare and cook a small, very nourishing meal for these children. This meal will include rice, dhal, green vegetables, fruit and milk. Sometimes, the meals will also include eggs or fish.

The vegetables will come from the *Community Vegetable Garden* which the members of the Mahila Samiti and Yuvak Mandal have started and are looking after.

The eggs will come from the *village poultry unit,* which the Samiti members have started.

The fish will come from the *village fish pond,* which the Panchayat have started and are looking after.

The rice and dhal will be contributed by the Panchayat members and parents. The Government will also contribute towards the cost of buying these.

The fuel will be collected by members of the Yuvak Mandal or contributed by the Panchayat.

As a result of receiving all this nourishing food, these young children will keep healthy, happy and active. They will grow up into strong, happy, useful boys and girls who, as they grow older, will be good members of *their community, their village* and *their country.*

Is there a Mahila Samiti in YOUR village ?

If YOU are a woman, are you a member ?

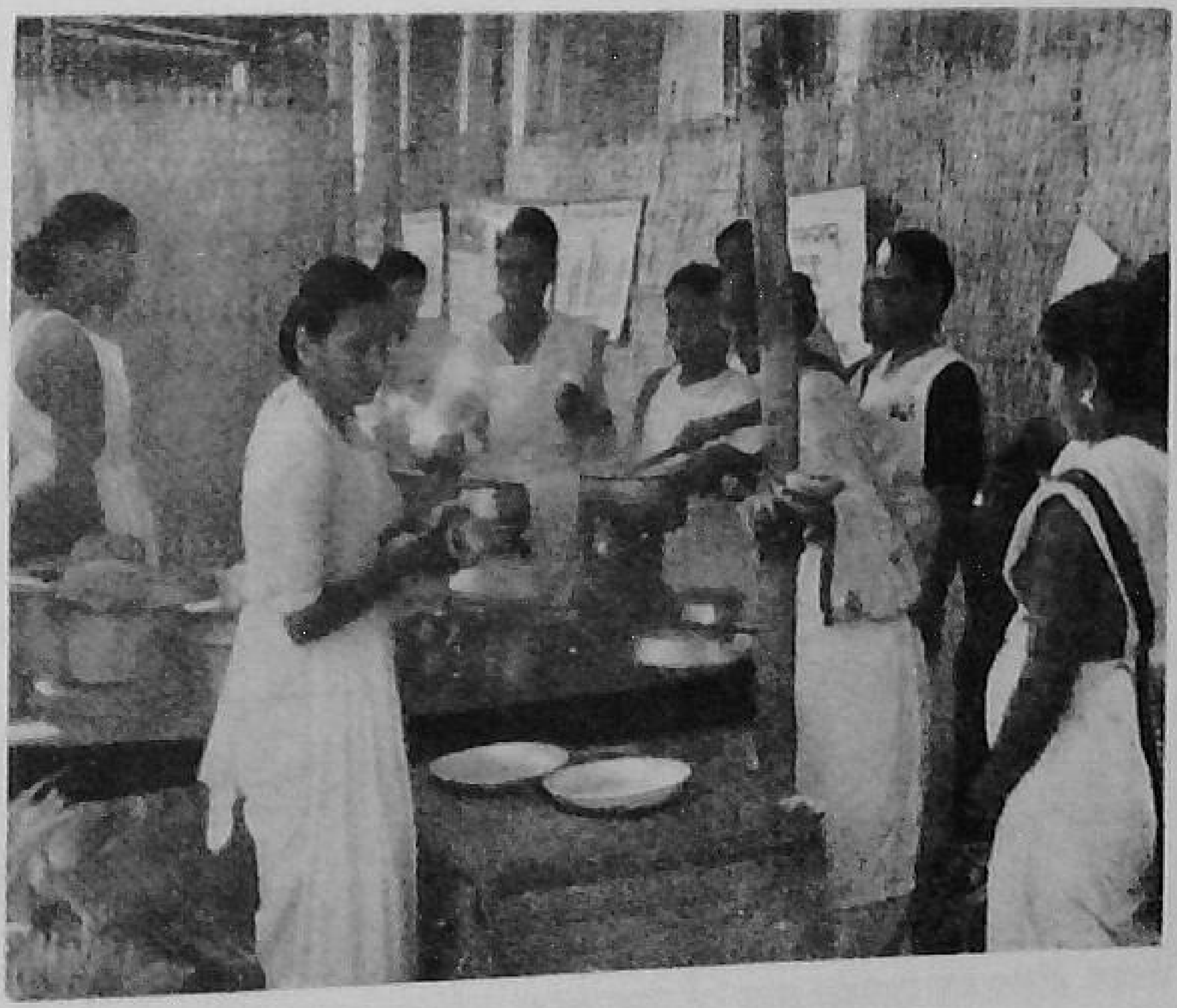
Do YOU take an active part in the activities of the Samiti ?

Have YOU a Mahila Samiti Meeting house or Club House ?

If not, why not?

Why not start to collect money NOW, so that soon, your Mahila Samiti will also own a meeting house, like the women shown in picture VIII

These women are very PROUD of their Meeting House and of all the new things they have learned. When YOU have a Samiti Meeting House, you will also be *PROUD* of it.



Picture IX

A nutrition and cookery demonstration at a Village Mela, organised by students at Gram Sevika Training Centre

How people can help to improve their diets and food :

Look at Picture IX. Here, under the guidance of the Mukhya Sevika and Gram Sevika, students at a Gram Sevika Training Centre, assisted by members

of a Mahila Samiti, have arranged a *Food Demonstration* for a local Mela. This demonstration was seen by hundreds of people who came from surrounding villages to attend the Mela.

What was the demonstration ?

The demonstration was arranged, in order to show people how to prepare new dishes and to enable them to taste new and different kinds of nutritious foods, which could easily be made available to them.

Samples were displayed of the different kinds of foods which can be given to young children at different age groups, to keep them strong, healthy and active.

Charts were prepared, with the help of the members of the Yuvak Mandal, under the guidance of the Social Education Organiser and the Mukhya Sevika, which show how these foodstuffs and meals were an improvement on those which most of the people were accustomed to eat in their own homes.

Hundreds of people tasted these dishes and liked them. They were shown how they could prepare these dishes in their own homes.

After the Mela was over, the Gram Sevika and members of the village Mahila Samitis helped the people to try out these new dishes and meals in their own homes.

Very many did so

They were able to make use of the new, cheap nutritious foods and thus greatly improved the diets of their families.

If YOU are a Gram Sevika, why not try and organise a small demonstration like this in some of the villages in which you work, with the help of members of the Mahila Samitis ?

SCHOOL MEALS

You may already have heard how the Government is helping schools and teachers, so that children can be given nourishing food while they are at school. In fact, you may already be living or helping in places where these school meals are being provided.

Midday meals are now being provided to very many children in schools in many parts of the Country. Many people, even from outside India, are also helping the Government to provide these meals, by supplying extra foodgrains, like rice, wheat and maize. Also, for several years, supplies of skim milk powder have been made available for the benefit of children in schools.

But, *in addition* to foodgrains and milk, children especially need the valuable nutrient substances which are provided by *pulses*, like dhal, the different grams, peas and beans and by *green leafy vegetables* and *other nutritious vegetables and fruit;* also, if the children will eat them, *eggs* and *fish*, which are especially valuable foodstuffs.

If the school meals are well designed and prepared from a nutritional point of view, so that they include the different foodstuffs which are necessary for good health, the children will *learn from the meals* which they receive at school, what is meant by a "GOOD DIET"

They will tell their parents

The parents may thus be helped to try and use, or to increase the use of, some of these nutritious foodstuffs in their own homes.

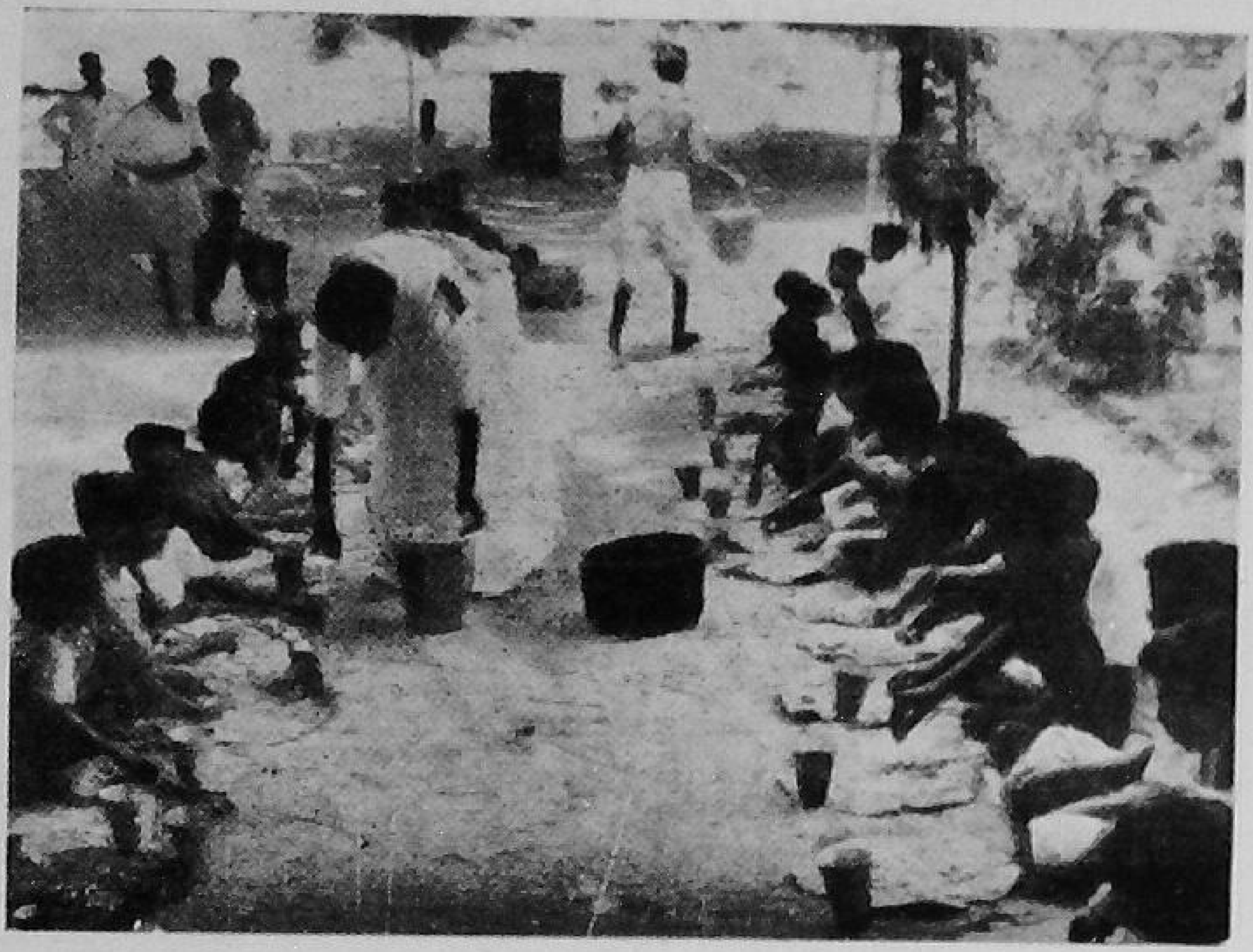
Thus

School meals should be educational.

If, also, the school meals are prepared and supplied under clean, hygienic conditions, they will teach the children the importance of cleanliness, before and during meals. The children will be taught the simple *rules of hygiene.* The risk of disease will be reduced and the children will remain healthy and will suffer less frequently from diarrhoea and other bowel diseases.

Thus

School meals can teach clean habits.



Picture X

A school mid-day meal—not in an ANP village

In Picture X, you will see school children enjoying a meal at school. The meal consists of rice and a cup of milk.

Some of the children walk a long way to school. They do not have very much to eat before they leave home. By the end of the morning,

THEY ARE HUNGRY.

They find it difficult to pay much attention to the teacher.

They cannot easily learn their lessons.

The teacher thinks that they are lazy.

He wants to punish them.

But it is not really the children's fault.

THEY ARE HUNGRY

Before the school meals were provided, the children did not learn their lessons very well. Their teacher was angry with them. Their parents were disappointed with them.

But the children could not really help it, because they had not eaten much that morning and, by midday, they were hungry and tired.

Then

the school teacher, the Panchayat, members of the Mahila Samiti and the parents, with help from the Government and from friendly people were able to start giving the children some food at school.

At first, as the picture shows, the food consisted only of some rice and some milk. But, *the children liked the food.*

They no longer felt hungry

They paid attention to their teacher.

They learned their lessons.

Their teacher was pleased.

Their parents were pleased.

Some of the children learned their lessons very well and were able to leave the village and go to a big school in a town. Later on, these children may have the opportunity to go to a

College or to a University.

This is what can happen

This is what should happen

This is what MUST happen

With YOUR Help, this is what WILL happen.

However, in the village with the school shown in Picture X
there was no *school* vegetable or fruit *garden*,
there was no *community* vegetable or fruit *garden*,
there was no *home* vegetable or fruit *garden*,

The village had yet been included in the

Applied Nutrition Programme

There was no poultry unit

There was no village fish pond

The people who lived in this village had not been shown how to start and manage these things.

They did not know how

Picture XI
Children washing their hands before a school meal, to ensure cleanliness

Picture XII
An improved way to distribute food for a school mid-day meal

Picture XIII
A school mid-day meal in an ANP village

Now look at Pictures XI, XII and XIII. These photographs were taken in a village which had been included in the

Applied Nutrition Programme

The people are very keen and enthusiastic about the programme

There is an active Mahila Samiti in this village.

There is an active Yuvak Mandal in this village.

The children have a very good vegetable and fruit

School Garden

The Yuvak Mandal and the Mahila Samiti have a very good

Community Garden

Most of the children and their parents have started

Home Gardens

Members of the Mahila Mandal and Yuvak Mandal have started a well managed

Poultry Unit

The Panchayat have a very good

Village Fish Pond

The fish pond was well stocked with small fish by the Fisheries Department and now contains plenty of large fish.

Members of the Mahila Samiti have been given information about the value of nutritious foods and also of good hygiene.

The Mukhya Sevika and the Gram Sevika often visit the village and give help and guidance to the people.

In this village, the school teacher asked the Panchayat, members of the Mahila Samiti and the Parents of the children to help start giving a mid-day meal to the children who attended his school.

A School Meals Committee was formed

How the food is collected:—At the time of harvest, many farmers and parents give rice. The rice is stored and used by the Mahila Samiti during the rest of the year for the school meals.

The Government contribute some money, according to the number of children in the school. The parents also contribute a few paise each day towards the cost of the food.

With this money, it is possible to buy dhal, grams, spices and a little sugar—which the village people cannot produce themselves—for use in the school meals.

The children grow good, nutritious *vegetables* and *fruit* in the school garden. Members of the Mahila Samiti and the Yuvak Mandal also grow *vegetables* and *fruits* in the community garden, some of which is used for the school meals. But some of the produce from the community garden is used for meals for the very young children, who are not yet old enough to go to school.

The Mahila Mandal, the Yuvak Mandal and some other people contributed *eggs* from their poultry units for use in the school meals.

The Panchayat also give *fish* from the fish pond, although most of the fish goes to help feed the children, who are not yet old enough to go to school and also some of the mothers, who specially need extra food.

The parents and other people in the village help to supply *fuel*, with which to cook the meals.

Members of the Yuvak Mandal have built a small kitchen near the school. This kitchen has a *smokeless chula*, and a fireless stove (hay-box). The School Meals Committee have bought *cooking utensils* and *aluminium plates* and *mugs* for the children to use.

Members of the Mahila Samiti and some parents, with permission from the school teacher, come to the kitchen in the morning to prepare and cook the food for the school meals.

THUS EVERYONE IN THE VILLAGE HELPS

The Panchayat, the parents, members of the Yuvak Mandal, members of the Mahila Samiti the Mukhya Sevika, the Gram Sevika and, of course the Government.

THE CHILDREN RECEIVE THE BENEFIT

How the meals are supplied :

Let us look at Picture XI again. Here, a member of the Mahila Samiti makes sure that each child washes his or her hands before eating the meal.

She has learned how important this is for cleanliness and to guard against disease.

Now, in Picture XII, the children are receiving the food.

The members of the Mahila Samiti, who have cooked the food, have now put the cooking vessels up on a low bench *off the ground.* The children line up with their plates and cups and are given their portions of rice, dhal, vegetables and milk.

Compare Picture XII with Picture X

In Picture X, you will see that the school helper has to carry a heavy cooking pot containing rice and a bucket containing milk round to each child who is seated on the dusty ground. As the helper distributes the food she has to stoop down all the time and her saree, if not tucked up, would sweep the dirt and dust of the floor. Some of this dirt and dust will fall on the food and the children will eat this with the food.

The dirt and dust may cause sickness.

Some of the children may get diarrhoea.

This is NOT a good way to serve the food.

Now let us look at Picture XII

Here, the members of the Mahila Samiti stand and serve the food and milk from containers on the low stand or bench. The women do not have to stoop; nor have they to lift heavy food containers or buckets. These are kept on the bench *off the floor* and away from dirt and dust. When not in use, the cooking pots are kept covered with clean plates.

No dirt or dust can get mixed with the food.

So these children should not become ill.

These children will not get diarrhoea.

This is a much better way to serve the food.

Now, let us look at Picture XIII.

Here, the children are eating the food. They are sitting on the floor. But the floor is covered by a mat. There is little dust. There is little dirt. Also, the aluminium plates have high rims. So no dust or dirt can get into the food.

Look at the food which the children are eating. They are also receiving rice and milk, like the children in Picture X.

But, *in addition*, these children have been given some dhal *and* one egg. On other days, they receive *green leafy vegetables*, like sag, cabbage or spinach; they also receive beans, carrots and other nutritious vegetables, according to the season. Sometimes, they receive fruit when available.

The children in Picture XIII are thus receiving
a much BETTER DIET than
the children in Picture X

The children in Picture XIII learn to like and to eat these new, nourishing vegetables and fruit.

When they go home, they tell their parents about them.
Their parents become curious and also try these vegetables.
Soon, they start growing them in their own gardens.
These children also learn the need for cleanliness
of their hands before eating,
of the surroundings where they eat,
of the plates, and cups which they use.

They will tell their parents of these things, so that they also will learn the importance of cleanliness and how to keep food free from dirt and dust.

They will find that the children do not get diarrhoea or other similar troubles so often.

The children keep well.
They are active and full of energy.

The teachers must also help the children to learn these things.

The teachers must help the children to learn
the value of nourishing fruit and vegetables
during their lessons,
in the school garden,
from the school meals.

The parents will also learn from the children, so all will benefit.

Conclusion

If you have read through this pamphlet, you will have learned how the APPLIED NUTRITION PROGRAMME will try to help you and your friends and all who live in the countryside and in the villages, how you can help to improve *your own health* and the *health of your children* and the *health of your families.*

You will now understand how important it is :

to *produce* more nutritious vegetables and fruit ;
to *produce* more eggs ;
to *produce* more fish ;
to *produce* more milk.

to *eat* more nutritious vegetables and fruit
to *eat* more eggs ;
to *eat* more fish ;
to *drink* more milk.

to *sell* more nutritious vegetables and fruit ;
to *sell* more eggs ;
to *sell* more fish ;
to *sell* more milk.

The GOVERNMENT will help you.

The APPLIED NUTRITION PROGRAMME will help you.

But you must also help

THE SUCCESS OF THE PROGRAMME DEPENDS ON *YOU*

IT IS *YOUR* PROGRAMME

with YOUR help it will succeed

without YOUR help it will not succeed.

IT MUST SUCCEED FOR THE FUTURE HEALTH,
HAPPINESS AND PROSPERITY

of

YOURSELF

YOUR FAMILY

YOUR CHILDREN

YOUR VILLAGE

and

Our Country

in order to

MAKE INDIA HEALTHY

MAKE INDIA PROSPEROUS

Make India Strong

PUBLISHED BY UNICEF.

Printed by Roxy Press, New Delhi.